FIG.1

13 FREQUENCY DIVIDER

16 PHASE COMPARATOR

REFERENCE SIGNAL

18 LOOP FILTER

OUTPUT MODULATED SIGNAL

21 DIGITAL PROCESSOR

DIGITAL MODULATION DATA

CARRIER SIGNAL

26 DIGITAL Σ-Δ MODULATION SECTION

FIG.2

TRANSMISSION DATA

AMPLIFIED SIGNAL

FIG.3

ORTHOGONAL BASEBAND SIGNALS

62 POWER CALCULATION SECTION

64 REFERENCE TABLE

66 NON-LINEAR DISTORTION COMPENSATION SECTION

72 QUADRATURE MODULATION SECTION

MODULATED SIGNAL

FIG.4

101 SIGNAL GENERATION SECTION

BASEBAND PHASE SIGNAL

102 PHASE DISTORTION COMPENSATION SECTION

103 STORAGE SECTION

104 FREQUENCY CONVERSION SECTION

105 MODULATION SECTION

106 PHASE COMPARING SECTION

REFERENCE SIGNAL

FIG.5

PHASE DISTORTION

IN-PHASE COMPONENT WAVEFORM DATA OF BASEBAND PHASE SIGNAL

TIME

FIG.6

103 STORAGE SECTION

104 FREQUENCY CONVERSION SECTION

105 MODULATION SECTION

106 PHASE COMPARING SECTION

REFERENCE SIGNAL

BASEBAND PHASE SIGNAL

301 SIGNAL GENERATION SECTION

FIG.7

101 SIGNAL GENERATION SECTION

BASEBAND PHASE SIGNAL

102 PHASE DISTORTION COMPENSATION SECTION

103 STORAGE SECTION

104 FREQUENCY CONVERSION SECTION

401 MODULATION SECTION

REFERENCE SIGNAL

402 PHASE COMPARING SECTION

FIG.8

101 SIGNAL GENERATION SECTION

BASEBAND PHASE SIGNAL

104 FREQUENCY CONVERSION SECTION

105 MODULATION SECTION

106 PHASE COMPARING SECTION

REFERENCE SIGNAL

501 DEMODULATION SECTION

502 PHASE DISTORTION COMPENSATION SECTION

FIG.9

101 SIGNAL GENERATION SECTION

BASEBAND AMPLITUDE SIGNAL

BASEBAND PHASE SIGNAL

102 PHASE DISTORTION COMPENSATION SECTION

103 STORAGE SECTION

104 FREQUENCY CONVERSION SECTION

105 MODULATION SECTION

106 PHASE COMPARING SECTION

601 AMPLITUDE CONTROL SECTION

AMPLITUDE CONTROL VOLTAGE

602 POWER AMPLIFIER

FIG.10

701 SIGNAL GENERATION SECTION

BASEBAND PHASE SIGNAL

702 STORAGE SECTION

703 PHASE DISTORTION COMPENSATION SECTION

704 MODULATION SECTION

CARRIER SIGNAL

705 RADIO SECTION

FIG.11

702 STORAGE SECTION

704 MODULATION SECTION

BASEBAND PHASE SIGNAL

CARRIER SIGNAL

705 RADIO SECTION

801 SIGNAL GENERATION SECTION

FIG.12

701 SIGNAL GENERATION SECTION

BASEBAND PHASE SIGNAL

704 MODULATION SECTION

CARRIER SIGNAL

705 RADIO SECTION

901 DEMODULATION SECTION

902 PHASE DISTORTION COMPENSATION SECTION

FIG.13

701 SIGNAL GENERATION SECTION

BASEBAND PHASE SIGNAL

BASEBAND AMPLITUDE

702 STORAGE SECTION

703 PHASE DISTORTION COMPENSATION SECTION

704 MODULATION SECTION

CARRIER SIGNAL

1001 AMPLITUDE CONTROL SECTION

1002 RADIO SECTION

1003 POWER AMPLIFIER

AMPLITUDE CONTROL VOLTAGE

FIG.14

MAGNITUDE OF FREQUENCY CHANGE